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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,209	01/28/2002	Yasuyuki Kusumoto	MAM-010	6909
20374	7590	11/01/2004	EXAMINER	
KUBOVCIK & KUBOVCIK SUITE 710 900 17TH STREET NW WASHINGTON, DC 20006			MERCADO, JULIAN A	
		ART UNIT	PAPER NUMBER	
		1745		

DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/056,209	KUSUMOTO ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Julian Mercado	1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 24 August 2004.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-10, 12-17, 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 1, 2, 4-10, 12, 13, 15-17, 19 is/are allowed.
- 6) Claim(s) 3 and 14 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Remarks***

This Office action is responsive to applicant's amendment filed August 24, 2004.

Claims 1-10, 12-17 and 19 are pending.

***Claim Rejections - 35 USC § 112***

The rejection of claims 4 and 19 under 35 U.S.C. 112, first paragraph has been withdrawn in view of applicant's arguments.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3 and 14 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the columnar structure in the film when sputtering is employed, does not reasonably provide enablement for said columnar structure when the other deposition methods , e.g. liquid phase, is employed. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

This rejection is maintained in its entirety as previously set forth in the prior Office action. Applicant's arguments filed with the present amendment have been fully considered, however they are not found persuasive.

Applicant cites pp. 19 and 20 as evidence that other methods aside from sputtering can be used to obtain thin films having the columnar structure. The other methods are, e.g. reactive deposition methods and ion beam-assisted reactive deposition methods. To this extent, the examiner acquiesces with applicant's assertions that these methods, aside from sputtering, are adequately shown by the specification to result in the claimed thin films having a columnar structure without undue experimentation. However, with respect to claim 4, other methods which may be characterized as "liquid phase" methods are maintained as not enabled by the original disclosure. Such "liquid phase" methods include the claimed chemical vapor deposition method, spraying method and plating method. The examples in the specification are limited to sputtering or reactive deposition methods only and are silent on liquid phase methods which result in the claimed thin film having a columnar structure.

In order to render this ground of rejection moot, it is suggested to delete these liquid phase methods from the scope of claim 4 and 14 or, alternatively, delete "liquid phase" from claim 1 and claim 12.

***Claim Rejections - 35 USC § 102 and 103***

The following rejections have been obviated by applicant's amendment:

1. The rejection of claims 1, 4, 8, 9, 12 and 19 under 35 U.S.C. 102(b) based on Ribes et al. ("Thin Films on Amorphous Electrode Materials for Li Microbatteries")
2. The rejection of claims 1-4, 8, 12-14 and 19 under 35 U.S.C. 102(b) based on Sarradin. ("Study of Fe<sub>2</sub>O<sub>3</sub>-based thin film electrodes for lithium-ion batteries")

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3. The rejection of claims 1, 2, 4, 5, 7-9, 12, 13, 15, 17 and 19 under 35 U.S.C. 102(b) based on Ito. ("K<sup>+</sup>- β-Ferrite as a New Cathode Active Material for Lithium Secondary Battery")
4. The rejection of claim 10 under 35 U.S.C. 103(a) based on Ribes et al. or Sarradin and Tomiyama et al. (U.S. Pat. 6,190,803).

***Allowable Subject Matter***

Claims 1, 2, 4-10, 12, 13, 15-17 and 19 are allowed. The examiner acknowledges applicant's amending of provisionally allowed claim 11 into its present independent form as independent claims 1 and 12. Thus, claims 1-10, 12-17 and 19 are allowed for the reasons indicated in the prior Office action for claim 11 (now canceled).

Claims 3 and 14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, first paragraph, set forth in this Office action. Claims 3 and 14 are allowable as being dependent from an allowed base claim.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Patrick Ryan  
SPE - AU 1745